Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-22 (Cancelled)

23. (New) A recombinant protein obtained from *Streptococcus pneumoniae* PBP2x protein, which recombinant protein comprises concatenated fragments corresponding, respectively, to amino acids located between positions 74 to 90, 186 to 199, 218 to 228 and 257 to 750, with reference to the sequence of the PBP2x protein of the strain R6 (SWISSPROT p 14677 or GENBANK 18266817), each one of said fragments being preceded by a peptide fragment of 1 to 7 amino acids.

24. (New) The recombinant protein of claim 23, wherein the peptide fragment comprises amino acids of said *Streptococcus pneumoniae* PBP2x protein located between positions -1 to -7, relative to the residues at positions 74, 186, 218 and 257, or between positions +1 to +7, relative to the residues at positions 90, 199 and 228, as defined in Claim 23, or both.

25. (New) The recombinant protein of Claim 23, wherein the peptide fragment comprises amino acids comprising alanine (A), serine (S), glycine (G) or threonine (T) or a combination thereof.

26. (New) The recombinant protein of Claim 23, which is obtained from a β-lactam-resistant strain of S. *pneumoniae*.

27. (New) The recombinant protein of Claim 23, which has the sequence of SEQ ID No. 1.

28. (New) The recombinant protein of Claim 23, which comprises a substitution of at least one methionine residue with a selenomethionine residue.

29. (New) The recombinant protein of Claim 23, which is associated with a ligand.

30. (New) The recombinant protein of Claim 23, which is in the form of a crystal.

31. (New) The recombinant protein of Claim 23, wherein said *Streptococcus pneumoniae* PB2x protein has a sequence identity which is at least 30% identical with the sequence of the strain R6 (SWISSPROT p 14677).

32. (New) The recombinant protein of Claim 31, wherein said *Streptococcus pneumoniae* PB2x protein has a sequence identity which is at least 50% identical with the sequence of the strain R6 (SWISSPROT p 14677).

33. (New) A peptide which comprises a fragment of at least 7 amino acids of the mini-PBP2x protein of Claim 23, which peptide includes at least one residue comprising those located at positions 74, 90, 186, 199, 218, 228 and 257 as defined in Claim 24.

34. (New) Antibodies which are directed against the peptide of Claim 33.

35. (New) An isolated nucleic acid molecule, which is selected from the group consisting of the sequences encoding a mini-PBP2x of Claim 23, and sequences complementary to the preceding sequences, which are sense or antisense.

36. (New) A pair of primers, having the sequence of SEQ ID Nos. 2-3.

37. (New) Primers comprising a sequence of approximately 10 to 30 nucleotides corresponding to those located at the junction of the peptide fragments of 1 to 7 amino acids and the fragments of PBP2x of Claim 23.

38. (New) The primers of Claim 37, having a sequence selected from the group consisting of the sequences of SEQ ID Nos. 4 to 9.

39. (New) A recombinant vector, which comprises an insert selected from the group consisting of the nucleic acid molecules encoding a mini-PBP2x of Claim 35.

40. (New) The recombinant vector of Claim 39, which is a prokaryotic vector.

41. (New) Cells transformed with the recombinant vector of Claim 39.

42. (New) Cells transformed with the recombinant vector of Claim 40.

43. (New) The cells of Claim 42, which are prokaryotic cells.

44. (New) A method for screening antibiotics, which comprises at least the following steps:

a_1) bringing a mini-PBP2x of Claim 23 into contact with a test compound,

b_1) detecting binding of said test compound with the mini-PBP2x or inhibiting activity of the mini-PBP2x resulting from the binding or both, and

c_1) identifying active compounds capable of binding to the mini-PBP2x or of inhibiting the activity of the mini-PBP2x, or both, for use of the active compounds as antibiotics.

45. (New) The method of Claim 44, wherein said inhibited activity of the mini-PBP2x in steps b_1) and c_1) is inhibited hydrolytic activity.

46. (New) A method for identifying antibiotics, which comprises at least the following steps:

a_2) preparing crystals from a mini-PBP2x of Claim 23,

b_2) determining a three-dimensional structure of the mini-PBP2x from the crystals obtained in a_2), and

c_2) identifying active compounds capable of binding to the mini-PBP2x or of inhibiting the activity of the mini-PBP2x, or both, for use as antibiotics.

47. (New) The method of Claim 46, wherein said inhibited activity of the mini-pB2x in step c_2) is inhibited hydrolytic activity.

48. (New) A screening kit, which comprises at least one protein, one peptide, one antibody, one vector, one cell, one probe or one primer of Claim 23.